

## PhD student – ATLAS group

### The IFIC ATLAS group:

The Instituto de Física Corpuscular (IFIC) is a joint center of the Spanish National Research Council (CSIC) and the University of Valencia (UV), devoted to particle, astroparticle and nuclear research, covering both the theoretical and experimental aspects of these fields. It is awarded as Severo Ochoa Excellence Centre. More information about IFIC can be found at <http://ific.uv.es/>

The ATLAS group at IFIC offers a **PhD position within the ATLAS experiment** at the CERN LHC (with starting date in Summer or Autumn of 2025). The group is strongly involved in the operation and Phase-II upgrade of the detector for the High Luminosity LHC, in particular for the Inner Detector, Tile Calorimeter and Trigger systems. The group has expertise in the modelling of physics processes using Monte-Carlo event generators, tracking, electron, photon and tau reconstruction and identification, and is deeply involved in top quark and Higgs boson physics contributing to precise measurements of their properties as well as to direct searches for new phenomena.

### Job description:

The successful candidate is expected to play an important role in new measurements involving top quarks and/or Higgs bosons to probe their couplings and study quantum entanglement, as well as performance studies. The study of those two particles is one of the main focus of the experiments at the LHC. The PhD candidate will use and explore cutting-edge technologies like big data analytics and artificial intelligence. Candidates are expected to have personal initiative and strong interest in the analysis of particle physics data and be willing to be involved in one of the largest scientific collaborations in the world. The position will be based in Valencia, with some research stays at CERN (one of the world's largest centers for scientific research).

### Applications:

Applicants must hold a Master degree (or equivalent) in Physics or in similar field, or expect to hold such a degree by September 30<sup>th</sup> 2025. Applicants should send a single pdf including the following documents: motivation letter, CV, academic transcripts and provide the email address of two referees who are willing to send a letter of recommendation. **Applications received by June 25<sup>th</sup> 2025 will be considered.** Selected candidates will be contacted for an online follow-up interview.

Applications and possible inquiries should be sent to: [maria.moreno.llacer@cern.ch](mailto:maria.moreno.llacer@cern.ch)